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MISSION THREADS

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SPAWAR 051JRAE PROJECT

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The Problem

- Mission threads are used by the individual services to allow:
  - The capability to analyze and assess the functionality of a system or family of systems
  - To design and conduct experiments
  - Testing and certifying systems for fielding
  - Development of training programs
- These mission threads have been for the most part used by the services to focus on their individual requirements and not to view across the battle space to allow joint collaboration

SO WHAT THREADS DO WE USE

The Problem (Continued)

- In general, each service has some "tool" that can provide similar, if not the same, types of mission thread functions for themselves. An example is Time Sensitive Targeting (TST).
- The difficulty arises when warfighters need to look across the battlespace and find targets, check for duplicates, check the status etc, they are confronted with a time-intensive process.
- *"Typically when this need arises, there are a lot of phone calls, e-mails, chats, manual documents that are coordinated and passed. Once a person gets target data from another source, it is up to them to try and figure out if it is a TST, a duplicate of one they have, etc. This can take a long time and a lot of manpower if the number of targets is large or the Area of Interest is large."* **OIF Warfighter**

THIS PROBLEM EXISTS FOR NUMEROUS MISSIONS.
TST in particular provides a common point for all agencies and warfighters to work together from the AS IS to the TO BE:
from start to finish of a warfighting process

AMMO for the panel discussions

Objectives

KISS

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- The objectives we should be striving to accomplish are, using net centric warfare, simply
  - Improve the timeliness of information available to the warfighter.

(operating within the enemies ability to react – controlling the situation)

  - Improve the accuracy of the information provided. (Common, validated information within the battlespace)
  - Workload reduction and productivity improvement. (More machine to machine interfaces, better data fusion and situational awareness)

THIS SIMPLE PROCESS CAN BUILD A SOLID NETCENTRIC FOUNDATION BETWEEN THE WARFIGHTER AND HIS NUMERIOUS ENABLING AGENCIES

The Common Point

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- Time Sensitive Targeting- *effects based* operations threads: <u>Joint Staff/ JFCOM approved</u>
  - Incorporates all the war fighting threads

PLAN FIND FIX TRACK TARGET ENGAGE ASSESS

HEAVY ENGAGEMENTS TO POLITICS
BOMBS ON TARGET - RIOT CONTROL - POLITICAL EFFECTS

ASSESSMENT

CERTIFICATION

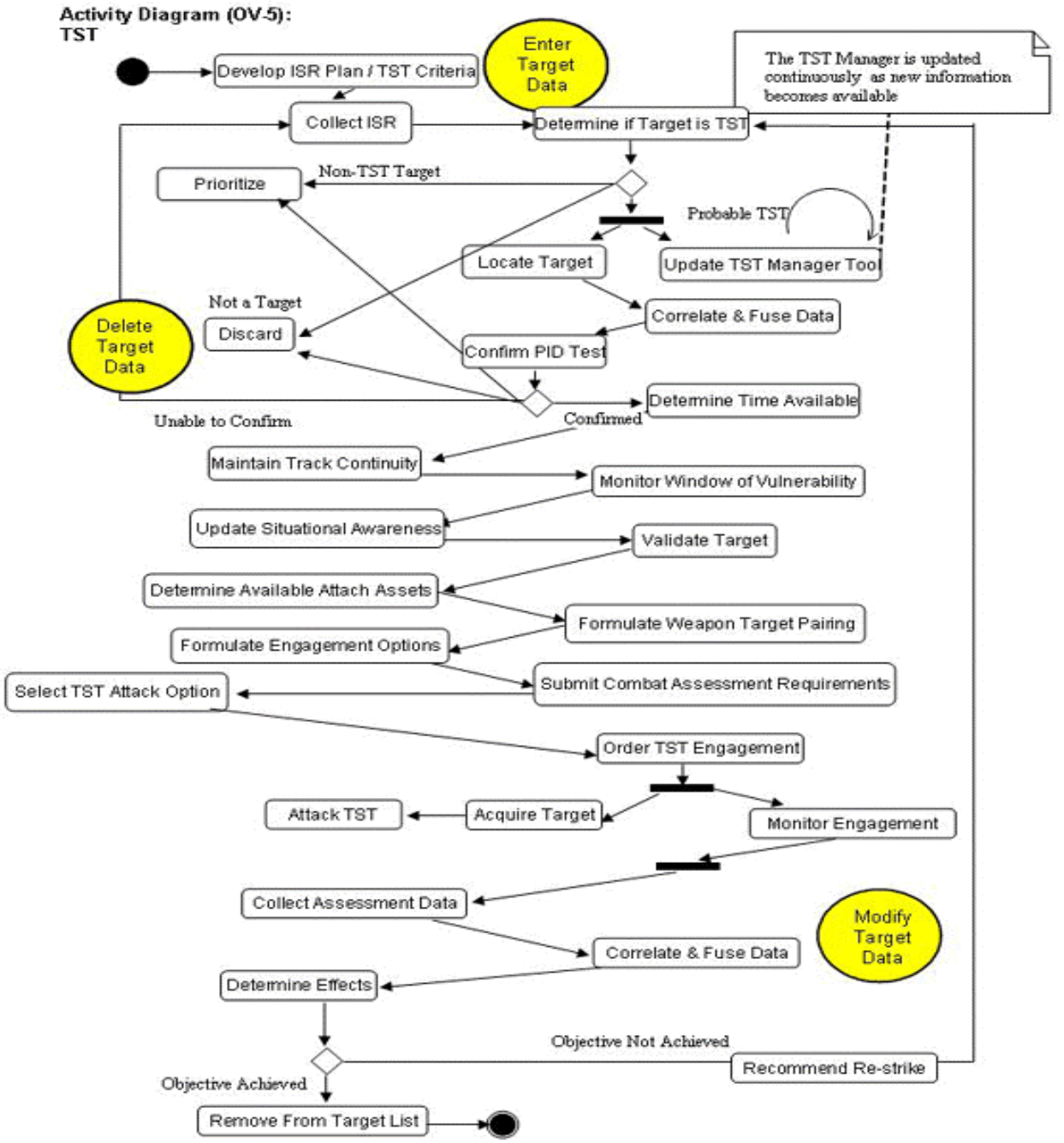
EXPERIMENTS

TESTING

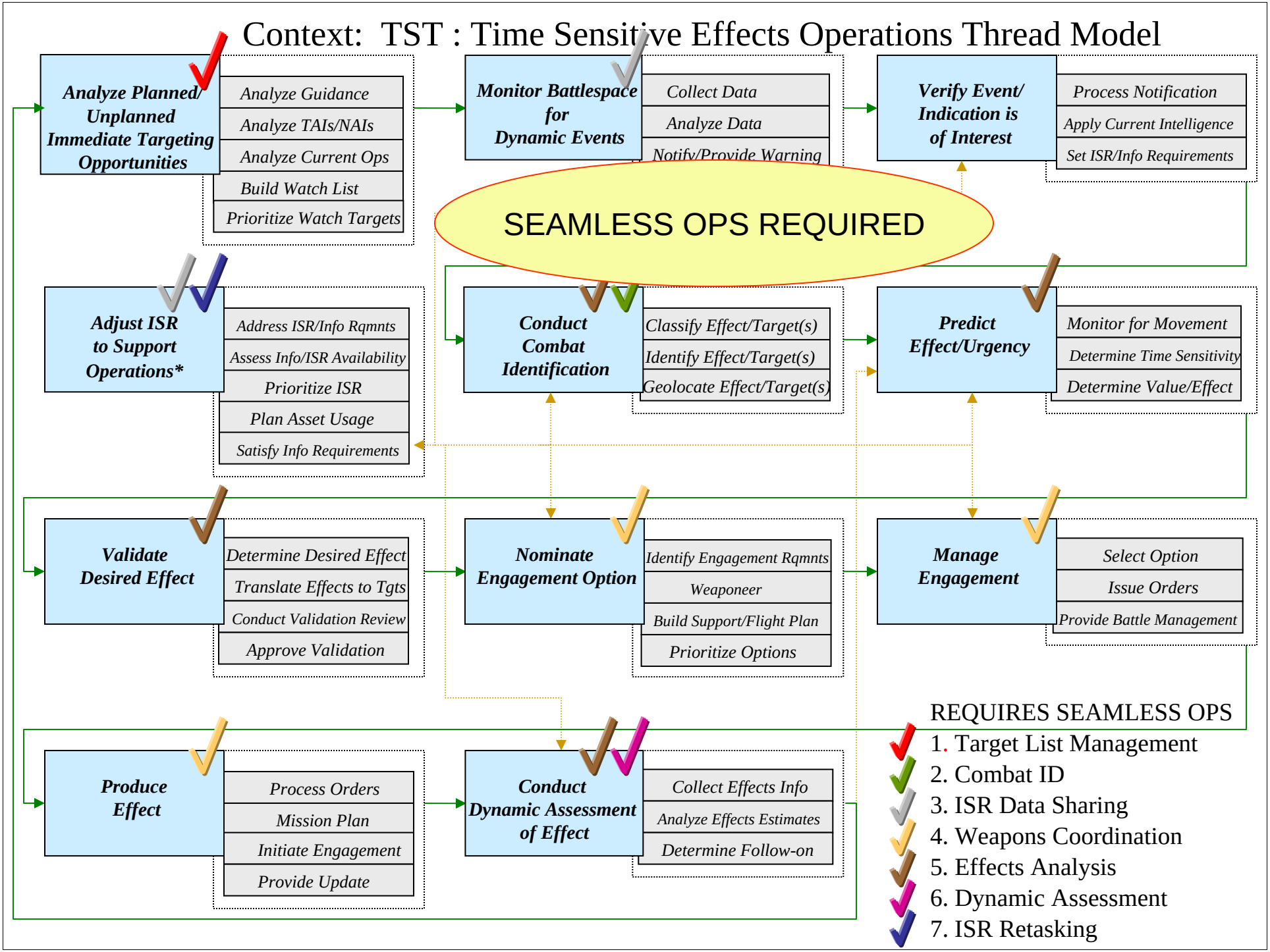
FORCENET

SEAMLESS NETCENTRIC OPS

JFCOM Activity Diagram for TST

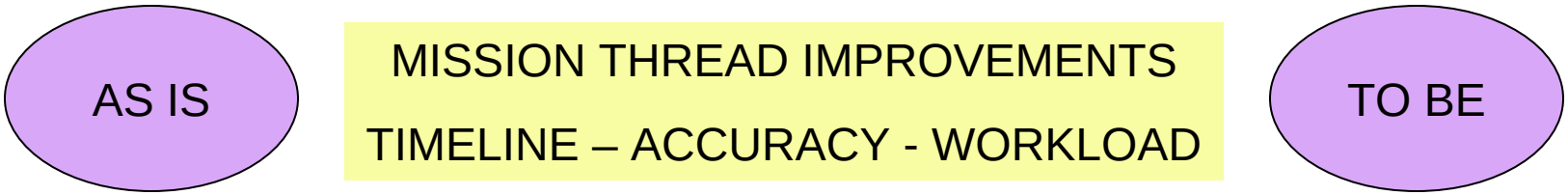


Context: TST : Time Sensitive Effects Operations Thread Model

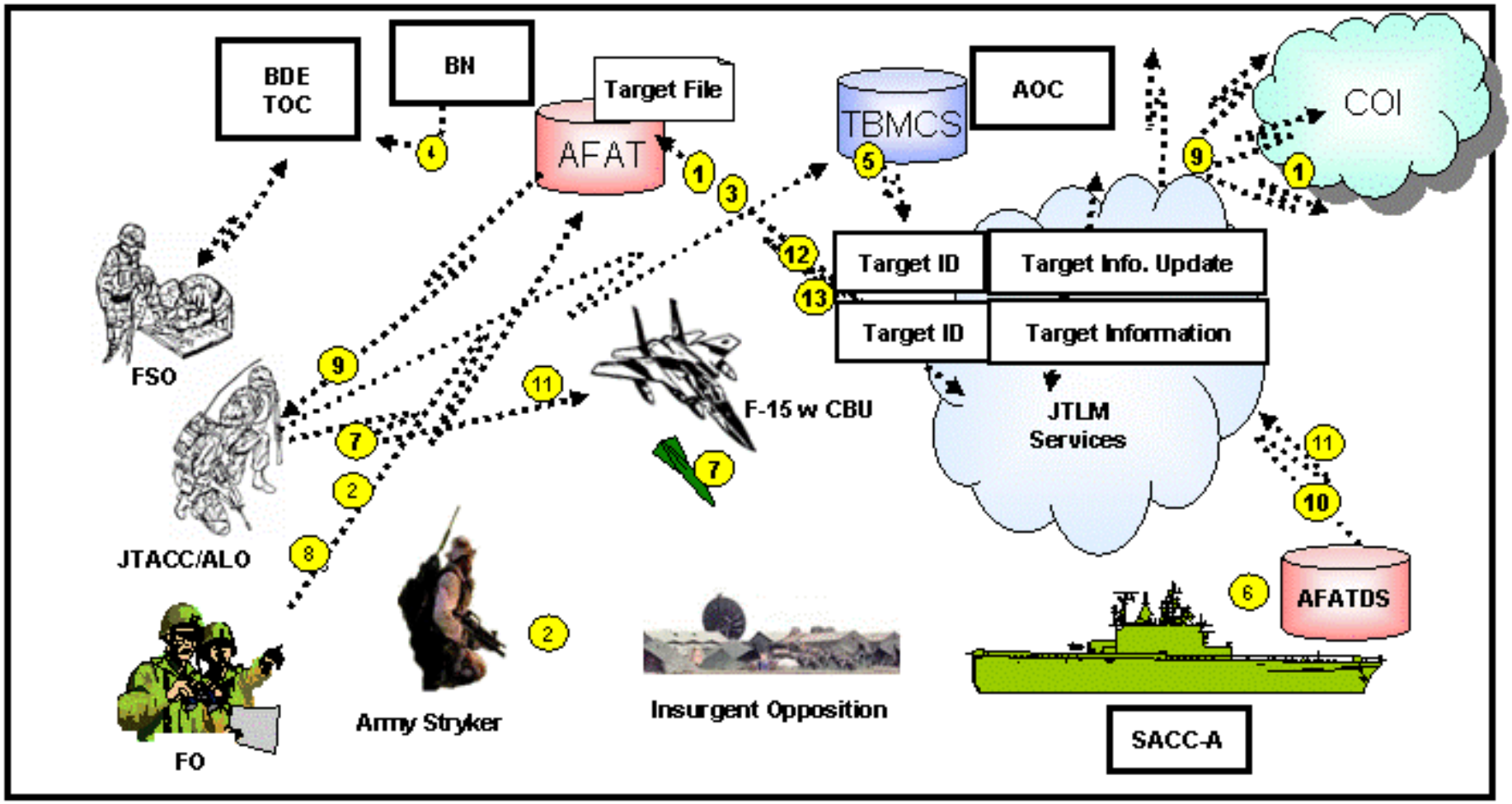


Example (Continued)

- The use of service oriented architecture (SOA) to improve joint target list management (JTLM)
  - Provide visibility of Joint and Coalition targets to all warfighters within the battle space
  - Allow the inexpensive and effective interface of legacy systems to improve battlespace situational awareness,decision making, engagements



Mission Threads



USE THE MISSION THREAD TO FIND METHODS TO REDUCE WORKLOAD, INCREASE ACCURACY, REDUCE TIMELINES

AMMO for the panel discussions

Process

KISS principle to get things moving

Seamless ops required between services

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- Using the JFCOM /JOINT STAFF approved TST Mission Thread as a *common starting point* to allow WARFIGHTER to provide how the process works today- (AS IS)
- Use these same Mission Threads to determine NETCENTRIC capabilities which can improve timeliness, accuracy and workforce reduction. (TO BE)
  - Use threads for testing
- Once the systems and procedures have been designed to achieve effects based operations, use the mission threads to evolve the new assessments, policies and training.

The use of a common TST thread:
which covers all the threads for engagements from single to large scale – from bullets to politics would be the common starting point between the *warfighter*
and his supporting agencies for assessing, testing, experimenting, certifying.
Expand from that point

AMMO for the panel discussions

Recommendations

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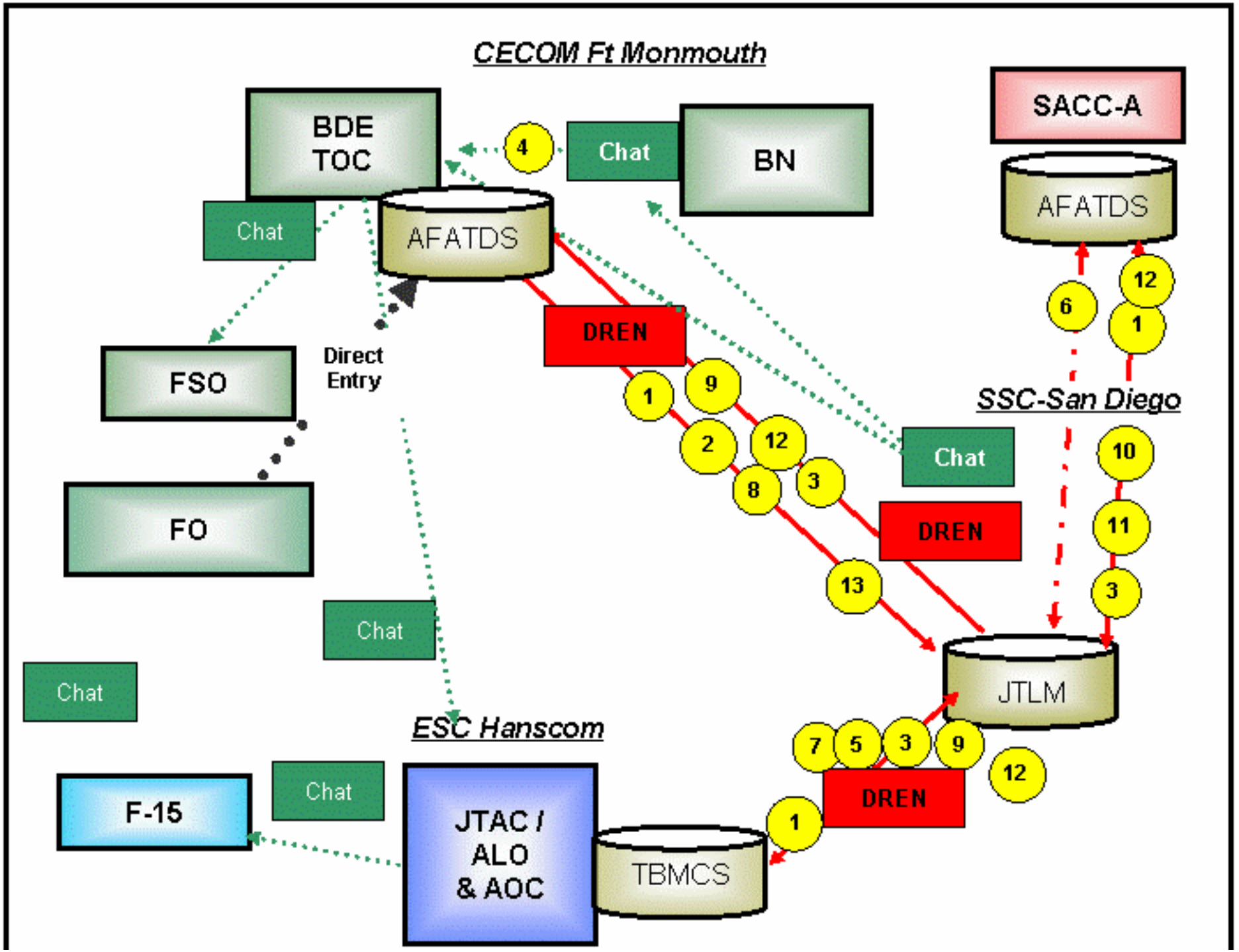
- Identify and ratify a single common joint mission thread for an initial start between the Warfighter and his supporting agencies.
- Pick a working group and a due date for the common thread selection.
- Identify parallel steps to move agencies and services to a common and seamless service oriented architecture to support the mission threads.
- Think seamless – JOINT.

Consider that development with experimentation across agencies using a common Mission thread could allow rapid parallel development of various areas of the architecture resulting in:
faster operational deployment of the capability

BACKUP


CECOM Ft Monmouth
BDE TOC
Chat
AFATDS
4
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SACC-A
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6
1
DREN
Direct Entry
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Chat
SSC-San Diego
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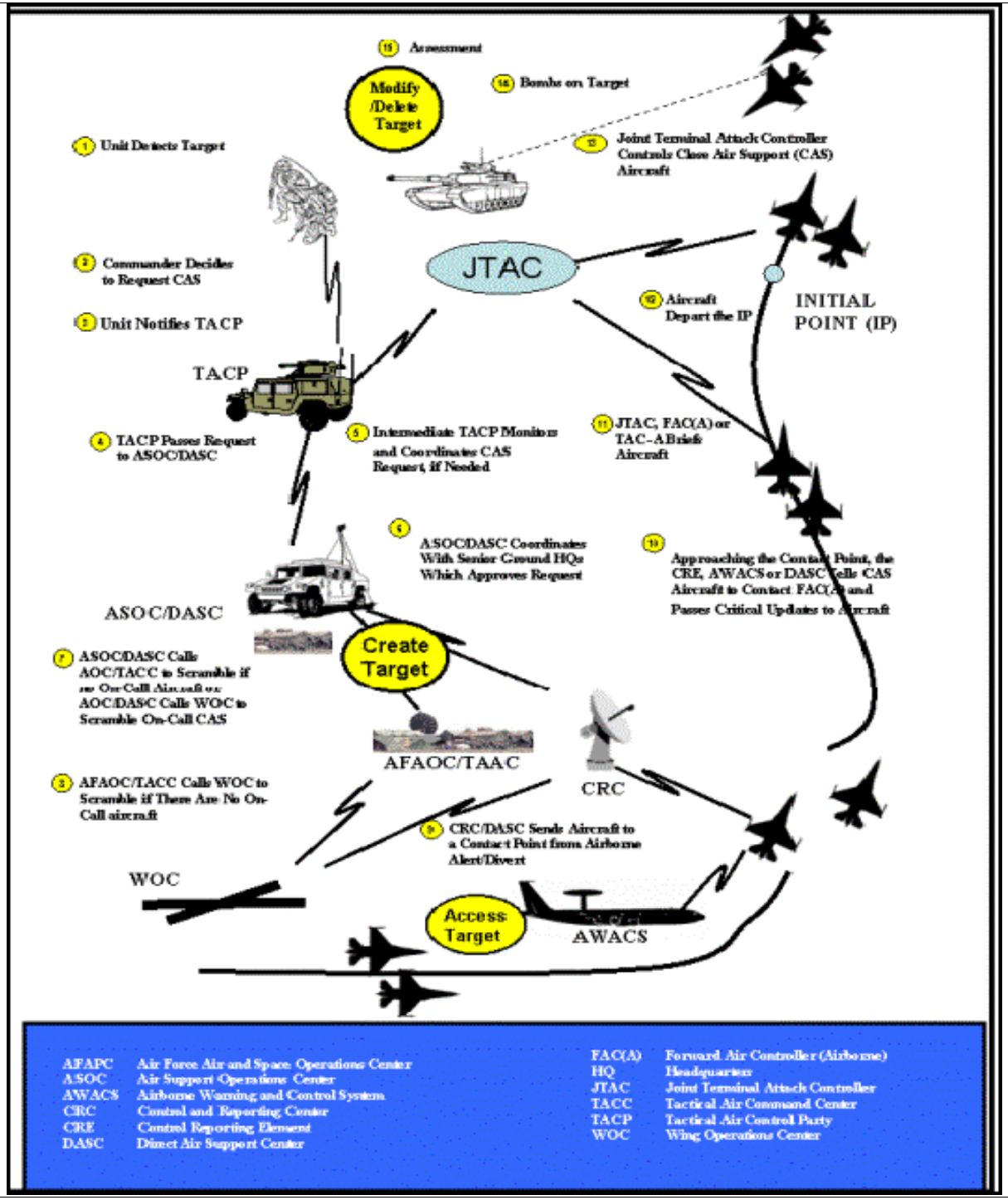
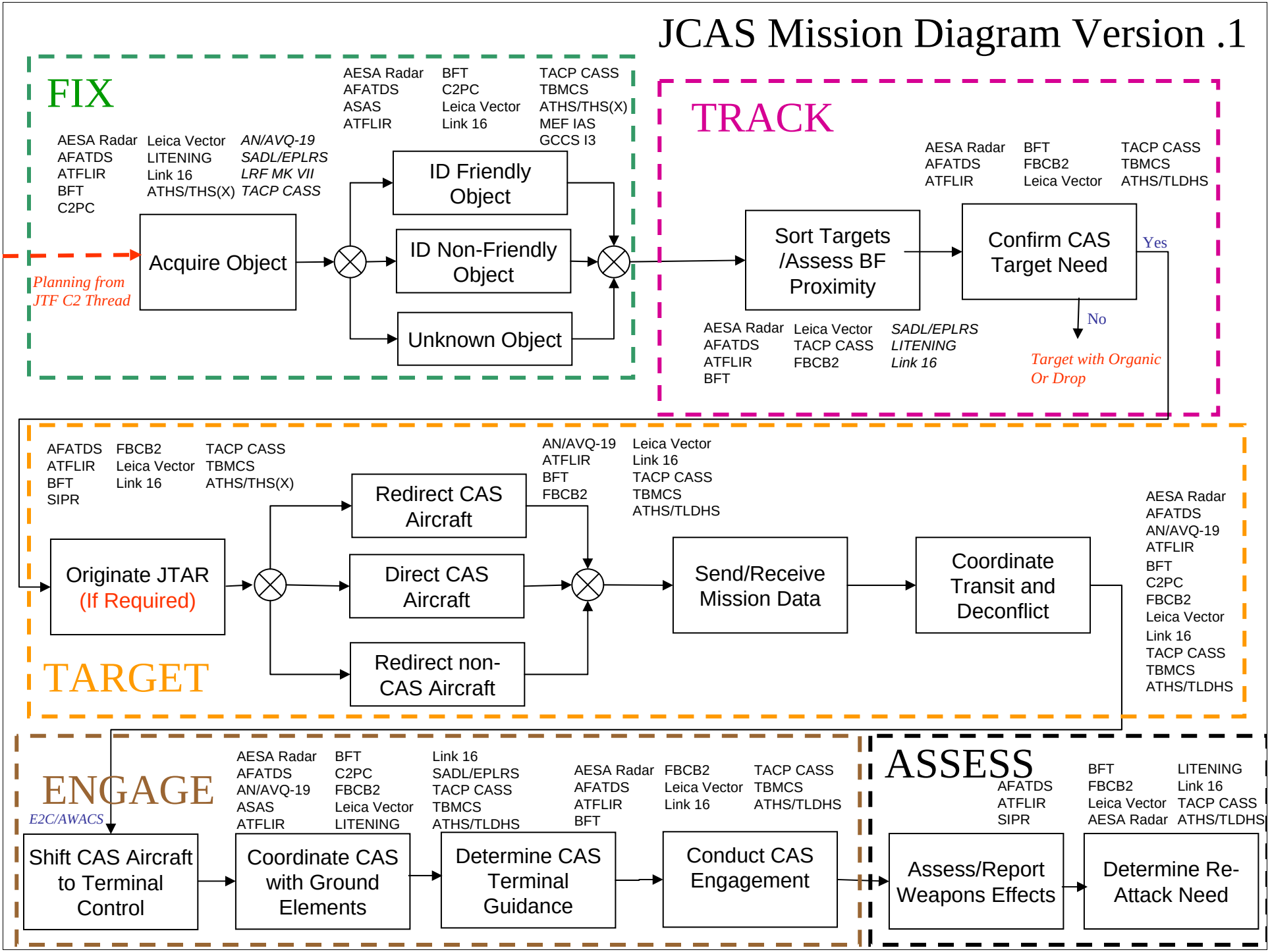

15 Assessment
Modify /Delete Target
16 Bombs on Target
1 Unit Detects Target
13 Joint Terminal Attack Controller Controls Close Air Support (CAS) Aircraft
JTAC
2 Commander Decides to Request CAS
3 Unit Notifies TACP
12 Aircraft Depart the IP
INITIAL POINT (IP)
TACP
4 TACP Passes Request to ASOC/DASC
5 Intermediate TACP Monitors and Coordinates CAS Request, if Needed
11 JTAC, FAC(A) or TAC-A Briefs Aircraft
6 ASOC/DASC Coordinates With Senior Ground HQs Which Approves Request
14 Approaching the Contact Point, the CRE, AWACS or DASC Calls CAS Aircraft to Contact FAC(A) and Passes Critical Updates to Aircraft
ASOC/DASC
Create Target
7 ASOC/DASC Calls AOC/TACC to Scramble if no On-Call Aircraft or; AOC/DASC Calls WOC to Scramble On-Call CAS
AFAOC/TAAC
CRC
8 AFAOC/TACC Calls WOC to Scramble if There Are No On-Call aircraft
9 CRC/DASC Sends Aircraft to a Contact Point from Airborne Alert/Divert
WOC
Access Target
AWACS
AFAPC Air Force Air and Space Operations Center
ASOC Air Support Operations Center
AWACS Airborne Warning and Control System
CRC Control and Reporting Center
CRE Control Reporting Element
DASC Direct Air Support Center
FAC(A) Forward Air Controller (Airborne)
HQ Headquarters
JTAC Joint Terminal Attack Controller
TACC Tactical Air Command Center
TACP Tactical Air Control Party
WOC Wing Operations Center

JCAS Mission Diagram Version .1